



6712-01

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 2 and 90

[PS Docket Nos. 13-87, 06-229; WT Docket No. 96-86, RM-11433, RM-11577; FCC 16-111]

Service Rules Governing Narrowband Operations in the 769-775/799-805 MHz Bands

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: In this document, the Federal Communications Commission (Commission) amends the Commission's rules to promote spectrum efficiency, interoperability, and flexibility in 700 MHz public safety narrowband (769-775/799-805 MHz).

DATES: Effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

FOR FURTHER INFORMATION CONTACT: John A. Evanoff, Policy and Licensing Division, Public Safety and Homeland Security Bureau, (202) 418-0848 or john.evanoff@fcc.gov.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Second Report and Order on Reconsideration in PS Docket No. 13-87, FCC 18-11, released on February 12, 2018, and corrected by Erratum released on May 10, 2018. The complete text of this document is also available for inspection and copying during normal business hours in the FCC Reference Information Center, Portals II, 445 12th Street SW.,

Room CY–A257, Washington, DC 20554. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an email to FCC504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (TTY).

SYNOPSIS

In this Second Report and Order, the Commission amends and clarifies the Commission’s 700 MHz narrowband (769-775/799-805 MHz) interoperability and technical rules. Specifically, this Second Report and Order (1) amends and clarifies the rules to exempt 700 MHz low-power Vehicular Repeater Systems (VRS) from the 700 MHz trunking requirements; (2) amends the rules to ensure that 700 MHz public safety licensees receive information on the basis of vendor assertions that equipment is interoperable across vendors and complies with Project 25 (P25) standards; and (3) amends the rules to require that all narrowband mobile and portable 700 MHz public safety radios, as supplied to the ultimate user, must be capable of operating on all of the narrowband nationwide interoperability channels without addition of hardware, firmware, or software, and must be interoperable across vendors and operate in conformance with P25 standards.

In the companion Order on Reconsideration, the Commission addresses the Petition for Partial Reconsideration filed by Motorola Solutions, Inc. (Motorola), which requested that the Commission postpone the effective date of certain previously adopted rules (*i.e.* 47 CFR Sections 2.1033(c) and 90.548(c)) until complementary proposals that were the subject of the *Further Notice of Proposed Rulemaking* in this proceeding are resolved. As requested by Motorola, we adopt a uniform effective date for the rules that

were the subject of the Motorola Petition for Partial Reconsideration and the rules newly adopted in this Second Report and Order.

PROCEDURAL MATTERS

The Final Regulatory Flexibility Analysis required by section 604 of the Regulatory Flexibility Act, 5 U.S.C. 604, is included in Appendix A of the Second Report and Order and Order on Reconsideration.

Final Regulatory Flexibility Analysis

As required by the Regulatory Flexibility Act of 1980, as amended (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated into the Further Notice of Proposed Rule Making (FNPRM) in PS Docket No. 13-87 released on August 22, 2016. See 81 FR 65984 (2016). The Commission sought written public comment on proposals in the FNPRM, including comments on the IRFA. No comments were filed addressing the IRFA. The present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.

Need for, and Objectives of, the Final Rules

In the Second Report and Order in this proceeding, we amend the interoperability and technical rules governing 700 MHz public safety narrowband spectrum (769-775 MHz and 799-805 MHz). The rule changes promote interoperable and efficient use of 700 MHz public safety narrowband spectrum while reducing the regulatory burdens on public safety entities, manufacturers and other stakeholders wherever possible. In order to achieve these objectives, we revise the rules to exempt low power vehicular repeater systems (VRS) from the narrowband trunking requirements. Exempting low power VRS from the trunking requirements will facilitate rapid deployment of such systems as well as reduce compliance burdens on public safety entities that currently lack access to

trunked equipment. We also amend the rule to clarify that the trunking requirement applies to fixed infrastructure.

We adopt a list of feature sets and capabilities that must be tested in order to ensure that radios operating in the conventional mode on the designated 700 MHz narrowband interoperability channels are in fact interoperable across vendors. Adopting such a list promotes certainty for public safety and manufacturers and promotes competition in the public safety equipment market.

We amend the rules concerning the requirement that 700 MHz radios be capable of being programmed to operate on the designated 700 MHz narrowband interoperability channels. Clarification provides greater certainty to equipment manufacturers on the required performance of their equipment.

Summary of Significant Issues Raised by Public Comments in Response to the IRFA

There were no comments filed that specifically addressed the rules and policies proposed in the IRFA.

Response to Comments by Chief Counsel for Advocacy of the Small Business

Administration

Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments.

The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

Description and Estimate of the Number of Small Entities to Which the Final Rules Will Apply

The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules adopted herein. The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.” In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.” A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.

Public Safety Radio Licensees. As a general matter, Public Safety Radio licensees include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services. Because of the vast array of public safety licensees, the Commission has not developed a small business size standard specifically applicable to public safety licensees. The closest applicable SBA category is Wireless Telecommunications Carriers (except Satellite) which encompasses business entities engaged in radiotelephone communications. The appropriate size standard for this category under SBA rules is that such a business is small if it has 1,500 or fewer employees. For this industry, U.S. Census data for 2012 show that there were 967 firms that operated for the entire year. Of this total, 955 firms had employment of 999 or fewer employees and 12 had employment of 1000 employees or more. Thus under this category and the associated size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities. With respect to local governments, in particular, since many governmental entities comprise the licensees

for these services, we include under public safety services the number of government entities affected. According to Commission records, there are a total of approximately 133,870 licenses within these services. There are 1476 licenses in the 700 MHz band, based on an FCC Universal Licensing System search of May 25, 2017. Public Safety Radio licensees are not required to disclose information about number of employees, therefore the Commission does not have information that could be used to determine how many Public Safety Radio licensees constitute small entities under this definition. Nevertheless, we estimate that fewer than 486 public safety radio licensees hold these licenses because certain entities may have multiple licenses.

Wireless Telecommunications Carriers (except Satellite). This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless internet access, and wireless video services. The appropriate size standard under SBA rules is that such a business is small if it has 1,500 or fewer employees. For this industry, U.S. Census data for 2012 show that there were 967 firms that operated for the entire year. Of this total, 955 firms had employment of 999 or fewer employees and 12 had employment of 1000 employees or more. Thus under this category and the associated size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities.

The Commission's own data—available in its Universal Licensing System—indicate that, as of October 25, 2016, there are 280 Cellular licensees that will be affected by our actions today. The Commission does not know how many of these licensees are

small, as the Commission does not collect that information for these types of entities. Similarly, according to internally developed Commission data, 413 carriers reported that they were engaged in the provision of wireless telephony, including cellular service, Personal Communications Service, and Specialized Mobile Radio Telephony services. Of this total, an estimated 261 have 1,500 or fewer employees, and 152 have more than 1,500 employees. Thus, using available data, we estimate that the majority of wireless firms can be considered small.

Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by the establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment. The Small Business Administration has established a size standard for this industry of 750 employees or fewer. U.S. Census data for 2012 show that 841 establishments operated in this industry in that year. Of that number, 828 establishments operated with fewer than 1,000 employees, 7 establishments operated with between 1,000 and 2,499 employees and 6 establishments operated with 2,500 or more employees. Based on this data, we conclude that a majority of manufacturers in this industry is small.

Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

The rules adopted in the Second Report and Order will not entail additional reporting, recordkeeping, and/or third-party consultation for small entities to comply.

Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

The RFA requires an agency to describe any significant, specifically small business alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) and exemption from coverage of the rule, or any part thereof, for small entities.”

The Second Report and Order changes the interoperability and technical rules covering operation of public safety systems on narrowband spectrum in the 700 MHz band. Specifically, the Second Report and Order amends Section 90.537 of the Commission’s rules to promote efficient use of public safety narrowband spectrum in the band while reducing economic burdens on licensees. For the 700 MHz General Use and State License channels, Section 90.537 provides that “[a]ll systems using six or more narrowband channels in the 769-775 MHz and 799-805 MHz frequency bands must be trunked systems, except for those described in paragraph (b) of this section.” In order to strike the proper balance between spectrum efficiency and operational needs as well as avoid unnecessary costs to public safety, the Second Report and Order exempts low power vehicular repeaters from the 700 MHz narrowband trunking requirements and clarifies that the trunking requirement applies to individual transmitter sites.

The Second Report and Order maximizes interoperability by adopting a list of feature sets and capabilities in radios designed to operate in the conventional mode on the

designated 700 MHz narrowband interoperability channels. Currently, the Commission's rules do not specify feature sets or capabilities that should be tested in order to promote interoperability across vendors and between users. Thus, it would be beneficial to incorporate into our rules specific feature sets and capabilities that must be tested for radios designed to operate on the 700 MHz narrowband interoperability channels. To minimize burdens, the Second Report and Order clarifies that manufacturers may employ their own testing protocol, declines to require manufacturers to test non-voice features and capabilities, and refrains from imposing new reporting and record keeping requirements on stakeholders.

Finally, the Second Report and Order amends the rules concerning the requirement that 700 MHz radios be capable of being programmed to operate on the designated interoperability channels. Amendment provides greater certainty to equipment manufacturers on the required performance of their equipment. Amending the rule obviates the need for imposing new requirements on public safety and manufacturers.

Report to Congress

The Commission will send a copy of the Second Report and Order, including this FRFA, in a report to Congress pursuant to the Congressional Review Act. In addition, the Commission will send a copy of the Second Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of this Second Report and Order, and FRFA (or summaries thereof) will also be published in the *Federal Register*.

Paperwork Reduction Act of 1995 Analysis

This document does not contain new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13.

Congressional Review Act

The Commission will send a copy of this Second Report and Order and Order on Reconsideration to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. 801(a)(1)(A).

Federal Rules That May Duplicate, Overlap, or Conflict with the Proposed Rules

None.

ORDERING CLAUSES

Accordingly, IT IS ORDERED that, pursuant to sections 1, 4(i), 303, 316, 332, and 337 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 154(i), 303, 316, 332, and 337, this Second Report and Order IS HEREBY ADOPTED.

IT IS FURTHER ORDERED that §§ 2.1033(c)(20), 90.537, 90.547 and 90.548 of the Commission's rules, 47 CFR 2.1033(c)(20), 90.537, 90.547, and 90.548, are AMENDED as set forth in Appendix B. The amendments to §§ 2.1033(c)(20), 90.537, 90.547 and 90.548 of the Commission's rules, 47 CFR 2.1033(c)(20), 90.537, 90.547 and 90.548, shall become effective thirty days after publication of this Second Report and Order in the Federal Register.

IT IS FURTHER ORDERED that the Petition for Clarification of Motorola Solutions, Inc. filed March 1, 2016, IS GRANTED, to the extent discussed in this Second Report and Order.

IT IS FURTHER ORDERED, pursuant to sections 4(i), and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), and 405(a), and § 1.429 of the Commission's rules, 47 CFR 1.429, that the Petition for Partial Reconsideration filed October 31, 2016, by Motorola Solutions, Inc. IS GRANTED to the extent discussed in this Second Report and Order and Order on Reconsideration.

IT IS FURTHER ORDERED, that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Second Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

IT IS FURTHER ORDERED that the Commission SHALL SEND a copy of this Second Report and Order in a report to be sent to Congress and the General Accounting Office pursuant to the Congressional Review Act, 5 U.S.C. § 801(a)(1)(A).

List of Subjects in 47 CFR Parts 2 and 90

Radio.

FEDERAL COMMUNICATIONS COMMISSION

Marlene Dortch,
Secretary.

Final Rules

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR parts 2 and 90 as follows:

PART 2— FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

1. The authority citation for part 2 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302, 303, 307, 336, and 337, unless otherwise noted.

2. Section 2.1033 is amended by revising paragraph (c)(20) to read as follows:

§ 2.1033 Application for certification.

* * * * *

(c) * * *

(20) Before equipment operating under part 90 of this chapter and capable of operating on the 700 MHz interoperability channels (See § 90.531(b)(1) of this chapter) may be marketed or sold, the manufacturer thereof shall have a Compliance Assessment Program Supplier's Declaration of Compliance and Summary Test Report or, alternatively, a document detailing how the manufacturer determined that its equipment complies with § 90.548 of this chapter and that the equipment is interoperable across vendors. Submission of a 700 MHz narrowband radio for certification will constitute a representation by the manufacturer that the radio will be shown, by testing, to be interoperable across vendors before it is marketed or sold.

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PART 90—PRIVATE LAND MOBILE RADIO SERVICE

3. The authority citation for part 90 continues to read as follows:

AUTHORITY: Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), and 332(c)(7), and Title VI of the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112-96, 126 Stat. 156.

4. Section 90.537 is amended by revising paragraph (a) to read as follows:

§ 90.537 Trunking requirement.

(a) General use and State License channels. All fixed transmitter sites using six or more narrowband channels in the 769-775 MHz and 799-805 MHz frequency bands must be trunked, except for those described in paragraph (b) of this section. This paragraph does not apply to Vehicular Repeater Systems (MO3) authorized on the General Use and State License channels listed in § 90.531(b).

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5. Section 90.547 is amended by revising paragraph (a) introductory text to read as follows:

§ 90.547 Narrowband Interoperability channel capability requirement.

(a) Except as noted in this section, mobile and portable transmitters operating on narrowband channels in the 769-775 MHz and 799-805 MHz frequency bands must be capable of operating on all of the designated nationwide narrowband Interoperability channels pursuant to the standards specified in this part. Provided, however, that the licensee need not program such transmitters to make all interoperability channels accessible to the end user.

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6. Section 90.548 is amended by revising paragraph (c) and adding paragraph (d) to read as follows:

§ 90.548 Interoperability Technical Standards.

* * * * *

(c) Transceivers capable of operating on the narrowband Interoperability channels listed in § 90.531(b)(1) shall not be marketed or sold unless the transceiver has previously been certified for interoperability by the Compliance Assessment Program (CAP) administered by the U.S. Department of Homeland Security; provided, however, that this requirement is suspended if the CAP is discontinued. Submission of a 700 MHz narrowband radio for certification will constitute a representation by the manufacturer that the radio will be shown, by testing, to be interoperable across vendors before it is marketed or sold. In the alternative, manufacturers may employ their own protocol for verifying compliance with Project 25 standards and determining that their product is interoperable among vendors. In the event that field experience reveals that a transceiver is not interoperable, the Commission may require the manufacturer thereof to provide evidence of compliance with this section.

(d) Transceivers capable of conventional operations on the narrowband Interoperability channels listed in § 90.531(b)(1) must, at a minimum, include the following feature sets and capabilities while operating in the conventional mode to be validated for compliance with the Project 25 standards consistent with § 2.1033(c)(20) of this chapter and paragraph (c) of this section.

(1) A subscriber unit must be capable of issuing group calls in a conventional system in conformance with the following standards: TIA 102.BAAD-B Conventional Procedures (2015), Section 6.1 with validation testing according to TIA-102.CABA

Interoperability Testing for Voice Operation in Conventional Systems (2010), Test Case 2.2.2.4.1, and Test Case 2.4.2.4.1.

(2) Two Project 25 standard squelch modes, Monitor Squelch and Normal Squelch, must be supported in conformance with the following standards: TIA 102.BAAD-B Conventional Procedures (2015), Section 6.1.1.3 with validation testing according to TIA-102.CABA Conventional Interoperability Testing for Voice Operation in Conventional Systems (2010), Test Case 2.2.3.4.1, Test Case 2.2.1.4.1 (Direct, normal squelch), Test Case 2.4.9.4.1 (Repeated, monitor squelch), and Test Case 2.4.1.4.1 (Repeated, normal squelch).

(3) A subscriber unit must properly implement conventional network access codes values (NAC) of \$293 and \$F7E in conformance with the following standards: TIA-102.BAAC-C Common Air Interface Reserved Values (2011), Section 2.1 with validation testing according to TIA-102.CABA Interoperability Testing for Voice Operation in Conventional Systems (2010), Test Case 2.2.1.4.1 and Test Case 2.2.8.4.1.

(4) A fixed conventional repeater must be able to repeat the correct/matching network access code (NAC) for all subscriber call types (clear and encrypted) using the same output NAC in conformance with the following standards: TIA 102.BAAD-B Conventional Procedures (2015), Section 2.5 with validation testing according to TIA-102.CABA Interoperability Testing for Voice Operation in Conventional Systems (2010), Test Case 2.4.1.4.1, and Test Case 2.4.2.4.1.

(5) A fixed conventional repeater must be able to repeat the correct/matching network access code (NAC) for all subscriber call types (clear and encrypted) using a different

output NAC in conformance with the following standards: TIA 102.BAAD-B Conventional Procedures (2015), Section 2.5 with validation testing according to TIA-102.CABA Interoperability Testing for Voice Operation in Conventional Systems (2010), Test Case 2.4.3.4.1 and Test Case 2.4.4.4.1.

(6) A fixed conventional repeater must be able to reject (no repeat) all input transmissions with incorrect network access code (NAC) in conformance with the following standard: TIA 102.BAAD-B Conventional Procedures (2015), Section 2.5 with validation testing according to TIA-102.CABA Interoperability Testing for Voice Operation in Conventional Systems (2010), Test Case 2.4.1.4.1, and Test Case 2.4.2.4.1.

(7) A fixed conventional repeater must be able to support the correct implementation of network access code (NAC) values \$F7E and \$F7F in conformance with the following standards: TIA 102.BAAD-B Conventional Procedures (2015), Section 2.5 with validation testing according to TIA-102.CABA Interoperability Testing for Voice Operation in Conventional Systems (2010), Test Case 2.4.5.4.1, Test Case 2.4.6.4.1, and Test Case 2.4.7.4.1.

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